TYPE SPECIMENS IN THE MACLEAY MUSEUM, UNIVERSITY OF SYDNEY

V. DECAPOD CRUSTACEANS

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Synopsis

The decapod crustacean type specimens at present in the Macleay Museum are listed by families. Specimens known to have been, or suspected of having been, lost are also listed.

Introduction

The Macleay Museum at the University of Sydney contains a comprehensive zoological collection including a number of type specimens. Lists of types of insects (Hahn, 1962), fish (Stanbury, 1968), reptiles (Goldman, Hill and Stanbury, 1969), birds (Stanbury, 1969a), and mammals (Stanbury, 1969b) have been published. Further lists (molluscs and miscellaneous invertebrates) are being compiled. This paper lists the 47 existing series of types of decapod crustaceans (95 specimens) and the 16 series of types which have apparently been lost during the Museum's varied history (Anderson, 1965).

THE DECAPOD CRUSTACEAN TYPES

The collections of types fall into two groups. Firstly, those described by W. S. Macleay in 1838: and secondly, those described by W. A. Haswell between 1879-1885.

Haswell published the majority of his descriptions in the Proceedings of the Linnean Society of New South Wales (Volumes 3, 4 and 6). The descriptions also appeared in Haswell's "Catalogue of the Australian Stalk and Sessile-Eyed Crustacea" published by the Trustees of the Australian Museum at Sydney in 1882. The specimens which Haswell described came from the east and north coasts of Australia from Tasmania to Darwin and some also came from Western Australia.

Macleay's types consist entirely of crabs while Haswell's are mainly of crabs, but there are also some important penaeid types.

The crab types are stored dry in individual cardboard trays or boxes in a light-tight cupboard. Haswell's types are glued on to glass plates.

All the specimens of decapod Crustacea in the Macleay Museum which are listed here were provided with labels giving the identification and the locality but except for the penaeids there was no indication on these labels that any specimen is a type. In almost all cases the labels are handwritten and the handwriting is that of Masters, the first Curator of the Macleay Museum. None of the specimens have been registered. Specimens have been taken to be types if the specimen agrees precisely with the original description and the locality is one of those originally stated. Barnard (1950) erroneously stated, "... Macleay's types [have been discovered] in the Australian Museum at Sydney."

Table I The Macleay Types

Name under which Described and References	Present Name and References	Type of Type, Number and Condition	Locality	
Dromidae Dromia rotunda Annulosa, p. 71.	Pseudodromia rotunda (McLeay) Barnard, 1950 Ann. S. Afr. Mus., 38:317	Holotype 1 specimen Good condition	Cape of Good Hope	
MAJIDAE Antilibinia Smithii Annulosa, p. 57, pl. 2	Antilibinia smithii (McLeay) Barnard, 1950 Ann. S. Afr. Mus., 38: 38	Holotype 1 specimen Good condition	Cape of Good Hope	
Acanthonyx scutellatus Annulosa, p. 57	Dehaanius scutellatus (McLeay) Barnard, 1950 Ann. S. Afr. Mus., 38: 47	Syntypes 2 specimens Good condition	Cape of Good Hope	
Mithrax quadridentatus Annulosa, p. 58	Schizophrys aspera (H. Milne Edwards) Barnard, 1950 Ann. S. Afr. Mus., 38: 60	Holotype 1 specimen Fair condition	Cape of Good Hope	
PORTUNIDAE Xaiva pulchella Annulosa, p. 62, pl. III	Xaiva biguttata (Risso) Monod, 1956 Mem. Inst. Fr. Afr. Noire, 45: 168	Syntypes 2 specimens Fair condition		
Charybdis Smithii Annulosa, p. 61	Charybdis smithii McLeay Stephenson and Rees, 1967 J. nat. Hist., 1: 285	Holotype l specimen Good condition	Cape of Good Hope	
XANTHIDAE Atergatis compressipes Annulosa, p. 59	Atergatis floridus (Linnaeus) Barnard, 1950 Ann. S. Afr. Mus., 38: 207	Holotype 1 specimen Good condition	Cape of Good Hope	
Halimede pisifer Annulosa, p. 60	Parapilumnus pisifer (McLeay) McNeill, 1968 Sci. Rep. Gt. Barrier Reef Exped. 1928–29, 7 (1): 62	Syntypes 3 specimens Good condition	Cape of Good Hope	
Chlorodius perlatus Annulosa, p. 59	Pilodius aerolatus (H. Milne Edwards) Barnard, 1950 Ann. S. Afr. Mus., 38: 214 (As Chlorodopsis areolata)	Syntypes 2 specimens Good condition	Cape of Good Hope	
Eriphia Smithii Annulosa, p. 60	Eriphia laevimana smithii Macleay, Sakai, 1965 Crabs of Sagami Bay, 152	Syntypes 2 specimens Good condition	Cape of Good Hope	
Eriphia Fordii Annulosa, p. 60	Eriphia laevimanus Guérin, Barnard, 1950 Ann. S. Afr. Mus., 38: 273	Holotype 1 specimen Good condition	Cape of Good Hope	
Grapsillus dentatus Annulosa, p. 67, pl. 3	Trapezia cymodoce (Herbst) Barnard, 1950 Ann. S. Afr. Mus., 38: 276	Holotype 1 specimen Fair condition	Cape of Good Hope	

TABLE 1—Continued
The Macleay Types—Continued

Name under which Described and References	Present Name and References	Type of Type, Number and Condition	Locality
Grapsillus maculatus Annulosa, p. 67	Trapezia rufopunctata (Herbst), Barnard, 1950 Ann. S. Afr. Mus., 38: 278	Holotype 1 specimen Fair condition	Cape of Good Hope
Grapsillus subinteger Annulosa, p. 67	Trapezia digitalis Latreille, Barnard, 1950 Ann. S. Afr. Mus., 38: 278	Holotype 1 specimen Fair condition	Cape of Good Hope
GRAPSIDAE Goniopsis flavipes Annulosa, p. 66	Grapsus grapsus (Linnacus) Crosnier, 1965 Faune de Madagascar, 18: 17	Holotype 1 specimen Good condition	Cape of Good Hope
Nautilograpsis Smithii Annulosa, p. 67	Planes minutus (Linnaeus) Chace, 1951 Proc. U.S. Natl. Mus., 101 (3272): 81	Holotype 1 specimen Good condition	Cape of Good Hope
Nautilograpsus major Annulosa, p. 66	Planes minutus (Linnaeus) Chace, 1951 Proc. U.S. Natl. Mus., 101 (3272): 81	Holotype 1 specimen Good condition	Cape of Good Hope
Gnathochasmus barbatus Annulosa, p. 65, pl. 3	Cyclograpsus punctatus H. Milne Edwards Campbell and Griffin, 1966 Mem. Qd. Mus., 14: 142	Syntypes 2 specimens Good condition	Cape of Good Hope

The Australian Museum also holds some of Haswell's type specimens. These types are all registered and the label is usually printed and in most cases bears the word "type". However, most of the specimens were registered by A. R. McCulloch around 1905, twenty or more years after the species were described by Haswell, and there are several cases where the word "type" appears on the label but the locality is not one of those mentioned by Haswell. In a few cases the word "type" has later been crossed out.

THE LISTS OF TYPES

The types are listed by families which are arranged in current systematic order. Table I lists the Macleay types and Table 2, the Haswell types. References are given to the scientific name under which the type was originally described as well as to the present name.

If the specimens belong to a type series, and the Australian Museum also holds part of this series, the Australian Museum registration numbers of such specimens are given in a note alongside the entry.

Unless otherwise stated, condition "good" means the specimen is complete or nearly so; condition "fair" indicates one or more appendages are missing. All the specimens are faded.

The types of the following species described by Macleay have not been found in the collection of the Macleay Museum. Current names for each species are given on the right.

LEUCOSIIDAE

Leucisca squalina same

MAJIDAE

Dehaanius acanthopus Dehaanius dentatus (H. Milne Edwards)

PORTUNIDAE

Achelous crassimanus Scylla serrata (Forskal)

GRAPSIDAE

Plagusia spinosa Plagusia chabrus (Linnaeus)

OCYPODIDAE

Cleistotoma (sic) Edwardsii Cleistostoma edwardsii (Macleay)

The types of the following species described by Haswell have NOT been found in the collections of either the Macleay Museum or the Australian Museum.

PENAEIDAE

Penaeus mastersii Metapenaeus ensis (De Haan)

ALPHEDAE

Alpheus comatularum same

PORCELLANIDAE

Porcellana vigintispinosa same

LEUCOSHDAE

Phlyxia petleyi Ebalia (Phlyxia) lambriformis (Bell)

Myrodes gigas Myrodes endactylus Bell

Leucosia cheverti same

MAJIDAE

Paratymolus bituberculatus same Chlorinoides tenuirostris same

Tiarinia mammillata Tiarinia cornigera (Latreille)

XANTHIDAE

Cycloxanthus punctatus Megametope punctatus (Haswell)

GONEPLACIDAE

Pilumnus inermis · Ceratoplax inermis (Haswell)

The type of the following species described by E. W. Bennett (1930) has NOT been found in the collections of the Macleay Museum although it was stated to have been deposited there.

Portunus borradailei Macropipus corrugatus (Pennant)

The nine extant specimens making up the type series of *Penacus granulosus* Haswell belong to five species. Three specimens now identified as *Trachypenacus granulosus* have been selected as lectotype and paralectotypes. The series is fully discussed elsewhere (Griffin, 1970a). It should be noted that a neotype has been selected for *Penacus mastersii* by Racek and Dall (1965); this specimen is in the collections of the Australian Museum.

The type series of *Phlyxia orbicularis* Haswell consists of three lots. That from Tasmania comprises two specimens, both males, in good condition. However, it is to be emphasized that the one fixed on the left hand side of the glass is, in fact, a specimen of *Philyra laevis* Bell. Among other differences between the two, the left hand specimen lacks the mid dorsal ridge on the carapace, the dorsal surface of the carapace is smooth, the posterior intestinal spine is represented by a low tubercle and the posterior margin of the carapace is rounded, not pointed at each end.

Liomera maculata Haswell is not discussed in any recent revision. It is, however, discussed by Griffin (1970b) and is considered to be synonymous with Xanthias punctatus.

Table 2
The Haswell types

Names under which described and references	Present name and references	Type of type, number and condition	Locality	Notes
Penaeidae Penaeus esculentus Proc. Linn. Soc. N.S.W., 4: 38; 1879	Penaeus esculentus Haswell Racek and Dall, 1965 Verh. Kon. Nederl. Akad. Wet. Nat., 56 (3): 11	Syntype 1 female	Port Jackson	Whereabouts of the Port Darwin specimen is un- known
Penaeus granulosus Proc. Linn. Soc. N.S.W., 4: 41; 1879	Trachypenaeus granulosus (Haswell) Racek and Dall, 1965 Verh. Kon. Nederl. Akad. Wet. Nat., 56 (3): 94	Syntypes 6 females, 2 males 1 female	Darnley Island, Torres Strait Cape York (Chevert Exped.)	Whereabouts of the Cape Grenville specimen is un- known (see text for further details)
Penaeus macleayi Proc. Limn. Soc. N.S.W., 4: 40: 1879	Metapenaeus macleayi (Haswell) Dall, 1957 Aust. J. mar. Freshvat. Res., 8: 196	Syntypes 2 females	Port Jackson	
Penaeus Novae-Guineae Proc. Linn. Soc. N.S.W., 4: 43; 1879	Metapenaeopsis novaeguineae (Haswell) Raoek and Dall, 1965 Verh. Kon. Nederl. Akad. Wet.	Holotype I male	Katow, New Guinea (Chevert Exped.)	
Penaeus palmensis Proc. Linn. Soc. N.S.W., 4: 43; 1879	Metapenaeopsis palmensis (Haswell) Racek and Dall, 1965 Verh. Kon. Nederl. Akad. Wet. Nat., 56 (3): 23	Holotype I female	Palm Island (Chevert Exped.)	
LEUCOSIIDAE Physia granulosa Proc. Linn. Soc. N.S.W., 4: 54; 1880	Ebalia tuberculosa (A. Milne Edwards) Sakai, 1965 Crabs of Sagami Bây, p. 28	Syntypes 4 specimens Poor to good condition	Off Sydney Heads (H.M.S. Challenger)	

Table 2—Continued
The Haswell types—Continued

Notes	Aust. Mus. has five specimens with printed label "Type loc. Port Jackson" (reg. P. 3917)		Whereabouts of the specimens from Sue Id unknown (Originally 3 specimens?)			Aust. Mus. has one specimen (female) with printed label "type, loc. Port Jackson (reg. P. 3907)	
Locality	Jervis Bay Tasmania	Damley Island, Torres Strait	Palm Island Cape Grenville Port Denison	Darnley Island, Torres Strait	Darnley Island, Torres Strait	Port Jackson	Fitzroy Island
Type of type, number and condition	Syntypes 1 male 1 female Fair condition 2 males Good condition	Holotype 1 female Poor condition	Syntypes 4 males Fair condition 1 specimen Poor condition 1 female, 3 males Fair condition	Syntypes 3 males Good condition	Holotype I male Good condition	Syntype I female Good condition	Holotype 1 specimen Fair condition
Present name and references	Ebalia (Phlyxia) undecimspinosa (Kinahan) Thle, 1918 Siboga-Exped. Monogr., 395 ² (livre 85): 311	Arcania pulcherrima Haswell Ihle, 1918 Siboga-Exped. Monogr., 396 ² (livre 85): 263	Myra australis Haswell Tyndale-Biscoe and George, 1962 J. Proc. R. Soc. W. Aust., 45: 88	Myra kessleri (Paulson) Tyndale-Biscoe and George, 1962 J. Proc. R. Soc. W. Aust., 45: 89	Leucosia leslii Haswell Ihle, 1918 Siboga-Exped. Monogr., 395 ² (livre 85): 316	Leucosia anatum (Herbst) Tyndale-Biscoe and George, 1962 J. Proc. R. Soc. W. Aust., 45: 80	Actaemorpha sculpta (Haswell) Jerene, 1954 Treubia, 22: 456
Names under which described and references	Phlyxia orbicularis Proc. Linn. Soc. N.S.W., 4: 54: 1880	Arcania pulcherrima Proc. Linn. Soc. N.S.W., 4: 58; 1879	Myra australis Proc. Linn. Soc. N.S.W., 4: 50, pl. V, fig. 3; 1880	Myra daruleyensis Proc. Linn. Soc. N.S.W., 4: 52; 1880	Leucosia lestii Proc. Linn. Soc. N.S.W., 4: 48; 1880	Leucosia splendida Proc. Lann. Soc. N.S.W., 4: 47, pl. V, fig. 1; 1880	Lithadia sculpta Proc. Linn. Soc. N.S.W., 4: 57; 1880

Table 2—Continued
The Haswell types—Continued

Notes	Aust. Mus. has three specimens (at least two males) with printed label. 'typeloc. Port Jackson, New South Wales '' (reg. G. 5092) (see text for further details)	Originally two specimens, remaining one was selected as a paralectotype (Griffin and Yaldwyn, 1965) Aust. Mus. has lectotype (reg. P. 163)			Aust. Mus. has two specimens (1 female, 1 male) with printed label, "type loc. Port Jackson" (reg. G. 5124). Male is probably figured specimen	Whereabouts of the specimen from Cape Grenville unknown
Locality	Cape Grenville (Chevert Exped.)	Port Jackson	Auckland	King George Sound, W.A. Tasmania	Port Jackson	Darmley Island, Torres
Type of type, number and condition	Syntype 1 specimen Poor condition	Syntype 1 specimen Poor condition	Holotype 1 female Poor condition	Syntypes I male Good condition I male Good condition	Syntype 1 female Good condition	Holotype 1 male Poor condition
Present name and references	Oncinopus neptunus Adams and White Takeda and Miyake, 1969 J. Fac. Agric. Kyushu Univ., 15: 477	Achaeus brevirostris (Haswell) Griffin and Yaldwyn, 1965 Trans, R. Soc. N.Z. Zool., 6: 46	Achaeus fissifrons (Haswell) Griffin and Yaldwyn, 1965 Trans. R. Soc. N.Z. Zool., 6:38	Naxia aurita (Latreille) Balss, 1935 Proc. R. Soc. W.Aust., 21: 120	Tunulosternum longimanus (Haswell) McCulloch, 1913 Rec. Aust. Mus., 9: 335	Micippa philyra (Herbst) Butendijk, 1939 Temmtuckia, 4: 255
Names under which described and references	Majidas Onchopus angulatus Proc. Linn. Soc. N.S.W., 4: 433: 1880	Stenorhynchus brevirostris Proc. Linn. Soc. N.S. W., 3: 408: 1879	Stenorhynchus fissifrons Proc. Linn. Soc. N.S.W., 3: 409: 1879	Halimus laveis Proc. Linn. Soc. N.S.W., 4: 435; 1880	Micippoides longimanus Proc. Linn. Soc. N.S. IV., 4: 444, pl. XXVI, fig. 5; 1880	Micippa superciliosa Proc. Linn. Soc. N.S. W., 4: 446, pl. XXVI, fig. 2; 1880

Table 2—Continued
The Haswell types—Continued

Notes	Aust. Mus. has one specimen with printed label "Type loc. Port Molle" (reg. G. 5139). There is no other evidence that this is a type	Aust. Mus. has 3 females and 1 male, probably not types, from Darnley I., but with same label and handwriting. Loose in box and not on glass. One specimen (male) with printed label "Type loc. Bowen, Queensland" (reg. G. 5150). This may be the specimen from Port Denison, but the word "type" has been crossed out			
Locality	Darnley Island, Torres Strait	Darnley Island, Torres Strait Cape Grenville	Darnley Island, Torres Strait (Chevert Exped.)	Darnley Island, Torres Strait	Palm Island
Type of type, number and condition	Syntypes 3 females Good condition	Syntypes 2 males, 2 females Poor condition 2 males, 1 female Poor condition	Holotype 1 male Good condition	Holotype 1 male Good condition	Holotype 1 female Poor condition
Present name and references	Tiarinia angusta Dana Griffin, 1966 Aust. Zool., 13: 288	Parthenope (Rhinolambrus) longispina (Miers) McNeill, 1968 Sci. Rept. Gt. Barrier Reef Exped., 1928–29, 7 (1): 48	Harrovia tuberculata Haswell Serene, 1958 Treubia, 24: 240	Zebrida adamsii White McNeill, 1968 Sci. Rept. Gt. Barrier Reef Exped., 1928–29, 7 (1): 47	Caphyra laevis (A. Milne Edwards) Stephenson and Campbell, 1960 Aust. J. mar. Freshwat. Res., 11: 97
Names under which described and references	Tiarinia spinosirostris Cat. Aust. Crust., p. 28; 1882	Parthenopidae Lambrus spinifer Proc. Linn. Soc. N.S. W., 4: 451, pl. XXVII, fig. 1; 1880	Harrovia tuberculata Proc. Linn. Soc. N.S.W., 4: 445; 1880	Zebrida longispina Proc. Linn. Soc. N.S.W., 4: 454; 1880	PORTUNIDAE Caphyra octodentata Proc. Linn. Soc. N.S.W., 6: 753; 1882

TABLE 2—Continued
The Hasvell types—Continued

Notes		See text for further details	Aust. Mus. has two specimens (male), with typed label "loc. Port Denison apparently the type of the species" (reg. G. 5573)		Aust. Mus. has eight specimens (all but one probably female) with printed label "Cotypesloc. Tasmania", (reg. P. 2262) plus one specimen (male) "typeloc. Tasmania" (reg. P. 733)	Aust. Mus. has two specimens (females) with printed label "typePort Jackson, New South Wales" (reg. P. 734)
Locality	Torres Strait	Endeavour River	Port Denison	Darnley Island, Torres Strait	Tasmania	Port Stephens
Type of type, number and condition	Holotype I male Poor condition	Holotype 1 male Good condition	Syntypes I male, I female Good condition	Holotype I male Poor condition	Syntypes 2 males, 1 female Good condition	Syntypes 3 males, 2 females Fair condition
Present name and references	Liomera venosa (H. Milne Edwards) Sakai, 1965 Crabs of Sagami Bay, p. 143	Xanthias punctatus (H. Milne Edwards) Forest and Guinot, 1961 Expédition Française sur les récifs coralliens de la Nouvelle Calèdonie, Vol. prelim: 68	Medaeops granulosus (Haswell) Guinot, 1967 Bull. Mus. Hist. nat., Paris, 2e Ser., 39: 366	Euranthus maculatus Haswell Buitendijk, 1960 Temminckia, 10: 306	Pilannus monitifer Haswell Takeda and Miyake, 1968 Ohnu, 1: 2	Pilumnus vestitus Haswell Takeda and Miyake, 1968 Ohmu, 1: 3
Names under which described and references	Xanythidae Carpilodes granulosus Proc. Linn. Soc. N.S.W., 6: 751; 1882	Liomera maculata Proc. Linn. Soc. N.S. W., 6: 752: 1882	Leptodius granulosus Cat. Aust. Crus., p. 61; 1882	Euxanthus maculatus Proc. Linn. Soc. N.S.W., 6: 751: 1882	Pilumnus monilifera Proc. Linn. Soc. N.S. W., 6: 543; 1881	Pilumnus vestitus Proc. Linn. Soc. N.S.W., 6: 753; 1882

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